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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,505

01/28/2004

Jozef Brcka

TAZ-246

3486

37694

7590

11/16/2005

EXAMINER

ARANCIBIA, MAUREEN GRAMAGLIA

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CINCINNATI, OH 45202

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/766,505

Applicant(s)

BRCKA, JOZEF

Examiner

Maureen G. Arancibia

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-13, drawn to an inductive element for an ICP source, classified in class 118, subclass 723I.
  - II. Claim 14, drawn to an ICP apparatus, classified in class 118, subclass 723I.
  - III. Claims 15-20, drawn to a method of plasma processing, classified in class 427, subclass 248.1+.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require that the inductive element comprise a conductor formed into at least one loop having shaped edges, or that the segments defined by those edges be from a plurality of differing geometries. The subcombination has separate utility such as in an ICP apparatus with no matching network.

Invention III and Inventions I and II are related as process and apparatuses for its practice. The inventions are distinct if it can be shown that either: (1) the process as

claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another and materially different apparatus than that of Group I, such as an inductive element not formed into at least one loop, and by another and materially different apparatus than that of Group II, such as an ICP apparatus with no matching network, or an ICP apparatus with an inductive element made up of segments with the same aspect ratios but differing geometries.

3. Because these inventions are distinct for the reasons given above and the search required for any one group is not required by any other group, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Joseph Jordan on 8 November 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Information Disclosure Statement***

5. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a

separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

6. The information disclosure statement filed 19 July 2005 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. In this case, it appears that several references were submitted, but no actual information disclosure statement was received. Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **50d in Figure 5**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,650,032 to Keller et al.**

In regards to Claims 1, 12, and 13, Keller et al. teaches an ICP apparatus (Figure 8), comprising a vacuum processing chamber 7 having a dielectric wall 6; and an inductive element 55 being outside the chamber and generally congruent to the dielectric wall and having a width and longitudinal extent generally parallel to the dielectric wall and having a thickness generally perpendicular to the dielectric wall (Figure 8), wherein the inductive element 55 comprises a conductor formed of a sheet of electrically conductive material (Column 5, Lines 39-41) formed into at least one loop having shaped edges defining a plurality of segments, including segments from each of a plurality of differing geometries, as broadly recited in the claim. (Figure 9)

In regards to Claims 2-6 and 9, the inductive element 55 taught by Keller et al. meets the geometrical limitations recited in the claims, including that the inductive element comprises segments of varying geometry and varying aspect ratio (narrowly angled vs. broadly angled or curved segments; narrower vs. wider segments), as well as cutouts and corresponding gaps. (Figure 9)

In regards to Claim 7, the conductor is an annular sheet split along a radius thereof at one point on its circumference (*the slit at the three o'clock position in Figure 9*). This provides ends of the conductor that would be capable of being connected across an RF power source. The Examiner notes that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) In this case, the recitation that the ends of the conductor are provided "for connection across an RF power source" is considered to be a recitation of intended use of the inductive element, and does not carry patentable weight. See also MPEP 2114. Moreover, the Examiner notes that Keller et al. expressly teaches that the inductive element is connected to an RF power source, preferably at the location marked with the small circle in Figure 9. (Column 5, Lines 34-51)

In regards to Claim 8, Keller et al. teaches that the inductive element has a generally planar shape. (Figures 8 and 9)

In regards to Claims 10 and 11, Keller et al. teaches that the cutouts are spaced around a circle (the circumference of the inductive element 55) at approximately equally circumferentially spaced intervals. (Figure 9)

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,459,066 to Khater et al. teaches that the principles of a planar inductive element can be extended to cylindrical, spherical, and conical geometries. (Column 7, Lines 9-26)

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen G. Arancibia whose telephone number is (571) 272-1219. The examiner can normally be reached on core hours of 10-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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